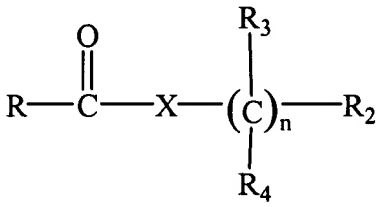
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of the Claims:

Claim 1 (currently amended): A method of ameliorating cough in a subject comprising the local administration to the upper respiratory airways of [a] the subject ~~in need of such treatment~~ of a ~~cannabinoid compound~~ CB1 cannabinoid receptor agonist of formula I:



wherein X is N-R_1 [[N-R1]]or O;

R is a saturated or unsaturated, chiral or achiral, cyclic or acyclic, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has 11 to 29 carbon atoms;

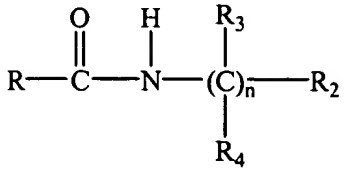
R_1, R_3 and R_4 [[R1 , R3 and R4]] are selected independently from hydrogen, alkyl (C1-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or a hydroxyalkyl group with from 2 to 4 carbon atoms;

R_2 [[R2]] is OH or O-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and

n is selected from 2 to 4.

Claims 2-4 (canceled).

Claim 5 (currently amended): A method of ameliorating cough comprising the local administration to the upper respiratory airways of a subject in need of such treatment of a ~~cannabinoid compound~~ CB1 cannabinoid receptor agonist of formula II:



wherein R is a saturated or unsaturated, substituted or unsubstituted hydrocarbyl group with from 15 to 29 carbon atoms;

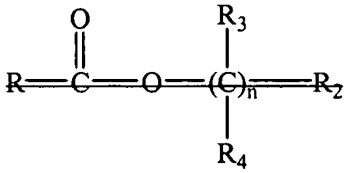
R_3 and R_4 [R3 and R4] are selected independently from hydrogen, alkyl (Cl-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or hydroxyalkyl group with from 2 to 4 carbon atoms;

R_2 [R2] is OH or O-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and

n is an integer selected from 2 to 4.

Claims 6 -7 (canceled).

Claim 8 (currently amended): A method of ameliorating cough comprising the local administration to the upper respiratory airways of a subject in need of such treatment of 2-arachidonylglycerol. ~~of a cannabinoid compound of formula III:~~



~~wherein R is a saturated or unsaturated; substituted or unsubstituted hydrocarbyl group with from 15 to 29 carbon atoms;~~

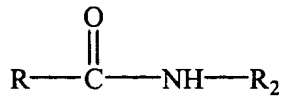
~~R_3 and R_4 [R3 and R4] are selected independently from hydrogen, alkyl (Cl-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or hydroxyalkyl group with from 2 to 4 carbon atoms;~~

~~R_2 [R2] is OH or O-CO-alkyl, where the alkyl group of O-CO-alkyl has from 1 to 4 carbon atoms; and~~

~~n is selected from 2 to 4~~.

Claim 9 (canceled).

Claim 10 (currently amended): A method of ameliorating cough in a subject comprising the local administration to the upper respiratory airways of the [a] subject or the systemic administration to the subject ~~in need of such treatment~~ of an inhibitor of endogenous cannabinoid inactivation of formula IV:



wherein R is a polyunsaturated, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has from 18 to 22 carbon atoms;

R_2 [[R2]] is selected independently from substituted or unsubstituted cycloalkyl (C3-6) group and substituted or unsubstituted phenyl group.

Claim 11 (original): The method of claim 10, wherein the phenyl group is selected from the group consisting of p-hydroxyphenyl and p-hydroxy-o-methyl-phenyl.

Claim 12 (currently amended): A method of ameliorating cough comprising the local administration to the upper respiratory airways of a subject or the systemic administration to subject in need of such treatment of an inhibitor of endogenous cannabinoid inactivation of formula V:

R_1——X——R_2

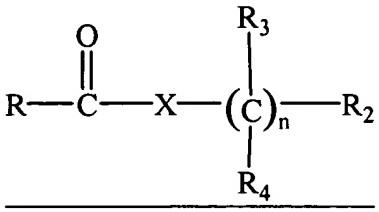
wherein [[R1]] R_1 is a saturated or polyunsaturated, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has from 6 to 22 carbon atoms;

X is -C=O or SO_2-; and

R_2 [[R2]] is a halogen or a halogen-substituted methyl group.

Claim 13 (currently amended): The method of claim 1, wherein the ~~cause of~~ the cough is selected from the group consisting of a ~~can be~~ persisting dry cough resulting from airway irritation and/or infection, an angiotensin converting enzyme (ACE) ~~inhibitors induced~~ inhibitor-induced cough, and a cancer-induced cough.

Claim 14 (currently amended): The method of claim 10, wherein the method further comprises administration of a CB1 cannabinoid receptor agonist ~~compound~~ of ~~formulae I, II or III.~~ formula I:



wherein X is N-R_1 or O;

R is a saturated or unsaturated, chiral or achiral, cyclic or acyclic, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has 11 to 29 carbon atoms;

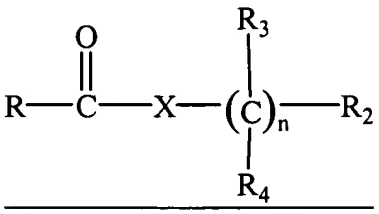
R_1, R_3 and R_4 are each selected independently from hydrogen, alkyl (C1-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or a hydroxyalkyl group with from 2 to 4 carbon atoms;

R_2 is OH or O-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and

n is an integer from 2 to 4.

~~, or any combination thereof~~.

Claim 15 (currently amended): The method of claim 11, wherein the method further comprises administration of a CB1 cannabinoid receptor agonist ~~compound~~ of formula I:



wherein X is N-R_1 or O;

R is a saturated or unsaturated, chiral or achiral, cyclic or acyclic, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has 11 to 29 carbon atoms;

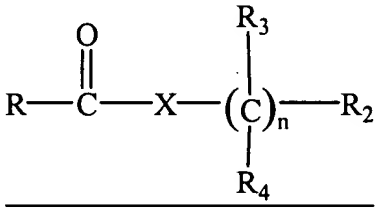
R_1, R_3 and R_4 are each selected independently from hydrogen, alkyl (C1-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or a hydroxyalkyl group with from 2 to 4 carbon atoms;

R_2 is OH or O-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and

n is an integer from from 2 to 4.

~~formulae I, II, III, or any combination thereof~~.

Claim 16 (currently amended): A method of ameliorating cough comprising the local administration of a CB1 cannabinoid receptor agonist of formula I ~~cannabinoid compound of formulae I, II, III, or any combination thereof,~~ to the upper respiratory airways of a ~~patients~~ patient in need of such treatment and whose vagal control of airway responsiveness is functional, wherein the formula I is:



wherein X is N-R_1 or O;

R is a saturated or unsaturated, chiral or achiral, cyclic or acyclic, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has 11 to 29 carbon atoms;

R_1, R_3 and R_4 are selected independently from hydrogen, alkyl (C1-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or a hydroxyalkyl group with from 2 to 4 carbon atoms;

R_2 is OH or O-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and

n is an integer from 2 to 4.

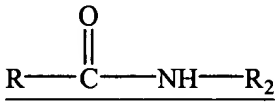
Claims 17-18 (canceled).

Claim 19 (currently amended): The method of claim 1 wherein the agonist ~~a cannabinoid of formulae~~ formula I is selected from the group consisting of arachidonylethanolamide (anandamide), (R)-(+)arachidonyl-1^1-hydroxy-2^1-propylamide, cis-7, 10, 13, 16-docosatetraenoylethanolamide, homo-delta-linoleyethanolamide, and N-propyl-arachidonylethanolamide.

Claim 20 (currently amended): The method of claim 10 wherein the [a] cannabinoid inactivation inhibitor of formula IV is 4-(hydroxylphenyl)-arachidonylamide.

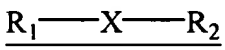
Claims 21-22 (canceled).

Claim 23 (currently amended): The method of claim 16, [[22]] wherein the method further comprises local or systemic administration of a pharmaceutical composition comprising a cannabinoid inactivation inhibitor of [[formula IV, V]] formula IV or formula V, or any combination thereof, wherein the formula IV is



wherein R is a polyunsaturated, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has from 18 to 22 carbon atoms; R_2 is selected independently from substituted or unsubstituted cycloalkyl (C3-6) group and substituted or unsubstituted phenyl group;

and the formula V is



wherein R_1 is a saturated or polyunsaturated, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has from 6 to 22 carbon atoms;

X is -C=O or SO_2-; and

R_2 is a halogen or a halogen-substituted methyl group.

Claim 24 (canceled).

Claim 25 (currently amended): The method of claim 16 [[22]] wherein the pharmaceutical composition is formulated for local delivery.

Claim 26 (currently amended): The method of claim 25 wherein the ~~formulation for~~ local delivery is by aerosol.

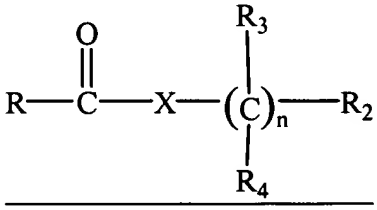
Claim 27 (original): The method of claim 23 wherein the pharmaceutical composition is formulated for local delivery.

Claim 28 (currently amended): The method of claim 27 wherein the ~~formulation for~~ local delivery is by aerosol.

Claim 29 (original): The method of claim 23 wherein the pharmaceutical composition is formulated for systemic delivery.

Claim 30 (currently amended) The method of claim 29 wherein the ~~formulation for~~ systemic delivery is by oral administration or intravenous administration.

Claim 31 (Currently amended): A pharmaceutical composition comprising a locally acting cannabinoid of formulae I~~, II, III, or any combination thereof~~, wherein the cannabinoid ameliorates cough and produces, at most, clinically insignificant dysphoric side effects, and wherein formula I is:



wherein X is N-R_1 or O;

R is a saturated or unsaturated, chiral or achiral, cyclic or acyclic, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has 11 to 29 carbon atoms;

R_1, R_3 and R_4 are selected independently from hydrogen, alkyl (C1-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), or a hydroxyalkyl group with from 2 to 4 carbon atoms;

R_2 is OH or O-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and

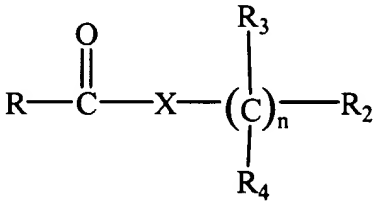
n is an integer from 2 to 4;

and wherein the cannabinoid is formulated for localized delivery to the upper airways.

Claim 32 (original): The pharmaceutical composition of claim 31 further comprising a pharmaceutically acceptable excipient.

Claims 33-36 (Canceled).

Claim 37 (currently amended): A method of ameliorating cough in a subject comprising the local administration to the upper respiratory airways of [a] the subject ~~in need of such treatment~~ of a ~~cannabinoid compound~~ CB1 cannabinoid receptor agonist of formula I:



where R is a saturated or unsaturated, chiral or achiral, cyclic or acyclic, substituted or unsubstituted hydrocarbyl group, wherein the hydrocarbyl group has ~~with~~ from11 to 29 carbon atoms; ~~and excluding aryl and methylene groups in said R optionally substituted with from 1 to 6 O or S atoms;~~

X is NH and R_2 is OH [[X is NR1 or O]]

R_1, R_3 and R_4 [[R1 , R3 and R4]] are selected independently from the group consisting of hydrogen, alkyl (C1-4), alkenyl (C2-4), alkynyl (C2-4), cycloalkyl (C3-6), and a [[or]] hydroxyalkyl group with from 2 to 4 carbon atoms;

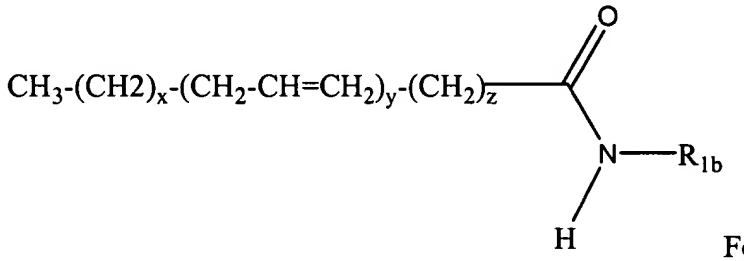
~~R_2 [[R2]] is OH or 0-CO-alkyl, where the alkyl group has from 1 to 4 carbon atoms; and~~
n is selected from 2 to 4
and wherein R_2 and X are joined together to form a heterocyclic ring.

Claim 38 (canceled).

Claim 39 (currently amended): The method of claim [[38]] 37 where the heterocyclic ring ~~structure~~ is a ~~selected from 2-oxazolidinone,~~ morpholine or oxazepine ring.

Claims 40-42 (canceled).

Claim 43 (new): The method of claim 1, wherein the compound has the formula:



Formula Ib

wherein R_{1b} is $(CH_2)_p$-$(CH_2)_q$-$(CH_2)_r$-OH, wherein p, q and r are each an integer of from 1 to 4; provided that p+q+r are less than or equal to 4, x is an integer of from 0 to 18, y is an integer of from 0 to 8, and z is an integer of from 0 to 18.

Claim 44 (new): The method of claim 1, wherein R_1 and R_3 are each hydrogen, and R_2 is hydroxy and n is 2.

Claim 45 (new): The method of claim1, wherein R is an acyclic and unsubstituted hydrocarbyl group.

Claim 46 (new): The method of claim 5, wherein R is an acyclic and unsubstituted hydrocarbyl group.

Claim 47 (new): The method of claim 1, wherein the agonist is selective for the CB1 cannabinoid receptor over the CB2 cannabinoid receptor.